NETZSCH Instruments sensXPERT Digital Mold

Alec Redmann, PhD

sensXPERT®

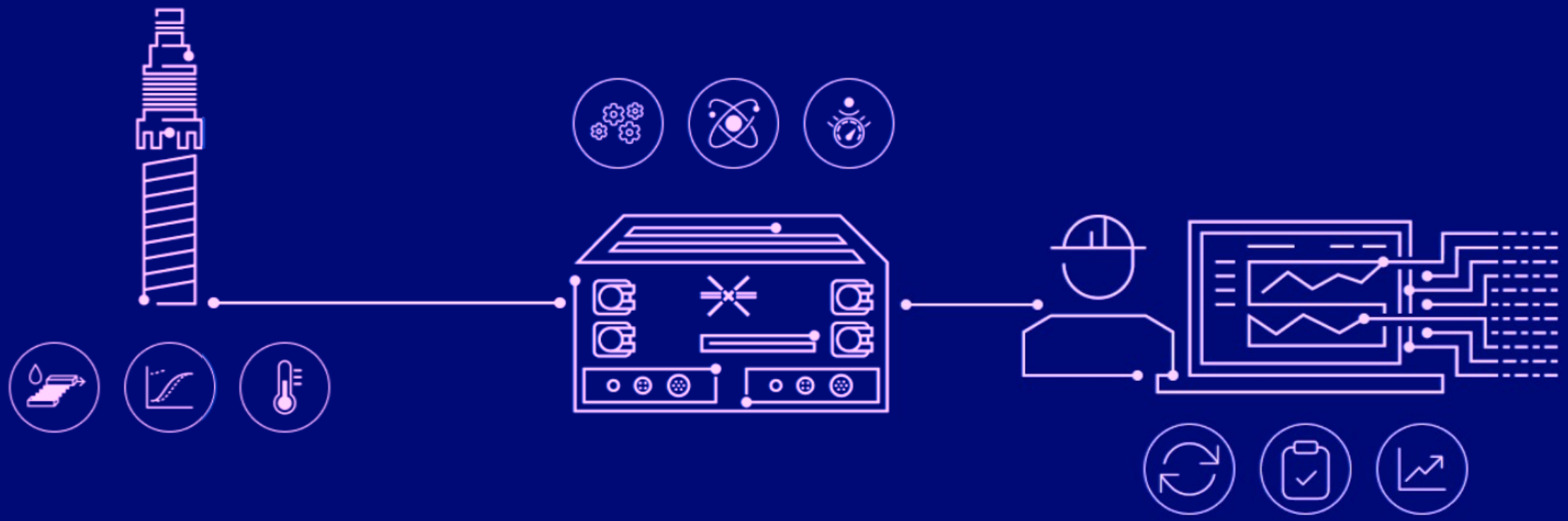
EXPAND your sense of the possible

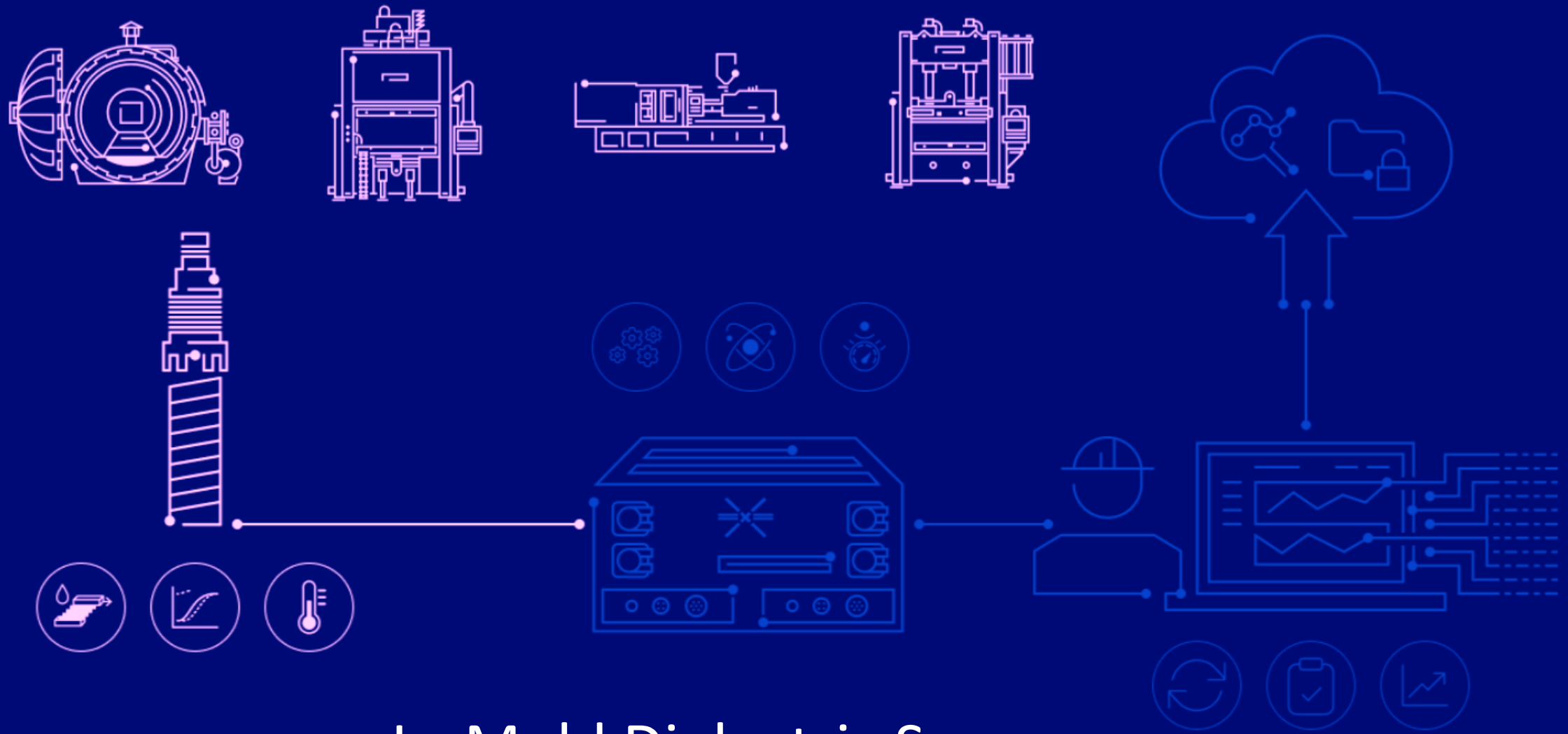
WHO WE ARE

NETZSCH
Proven Excellence.

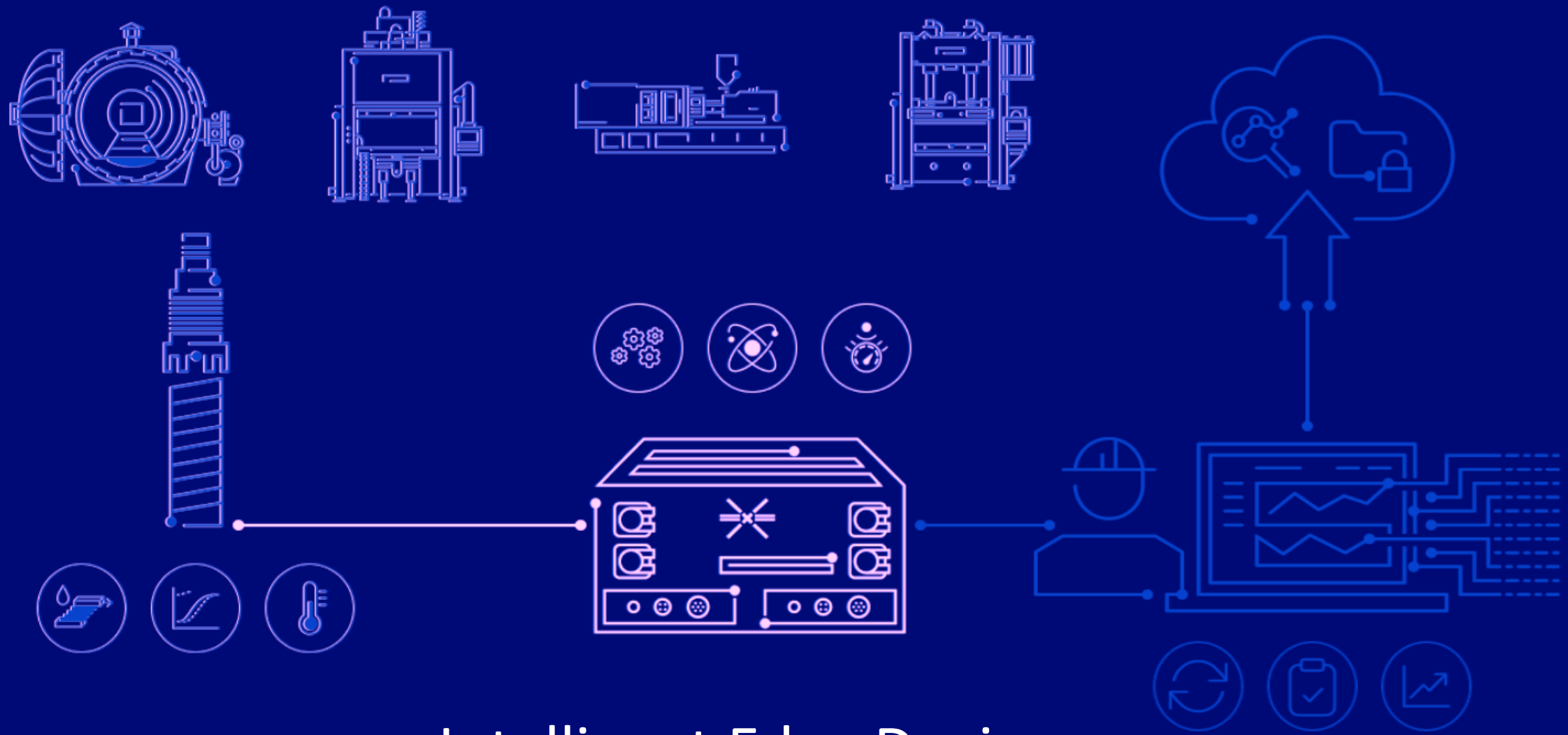
- Location: Boston, MA
- High-Precision Thermal Analysis Equipment
- Full-Service Testing Facilities
- **sensXPERT Digital Mold**

sensXPERT Digital Mold





In-Mold Dielectric Sensors



Intelligent Edge Device

Dynamic Process Optimization

Aviation Industry

Use Case

sensXPERT®

EXPAND your sense of the possible

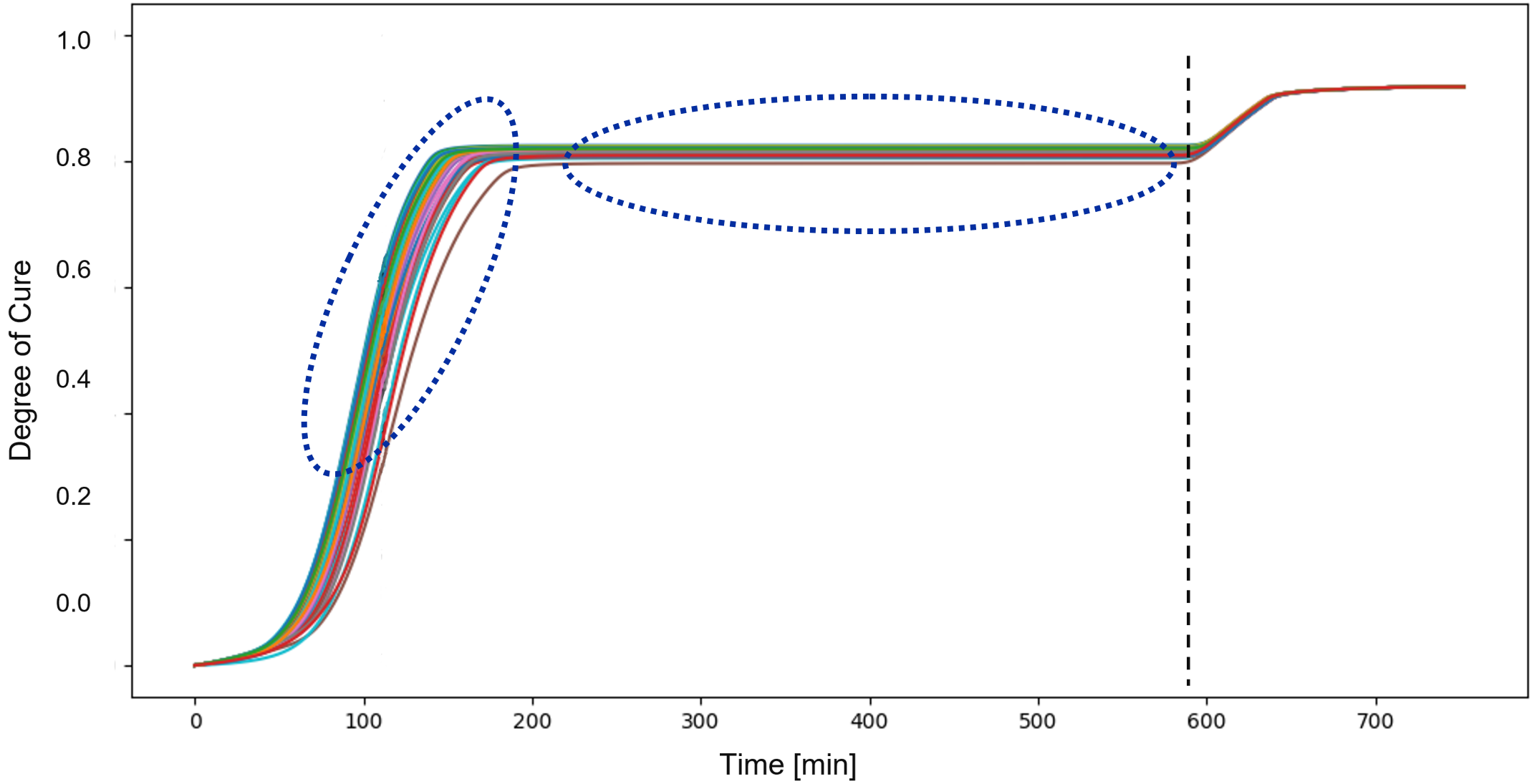
sensXPERT USE CASE:
COMPOSITE AEROSPACE BEAMS

Component: Composite Beams

Material: Infusion Epoxy / Carbon Fiber

Quality Criterion: Degree of Cure > 90%

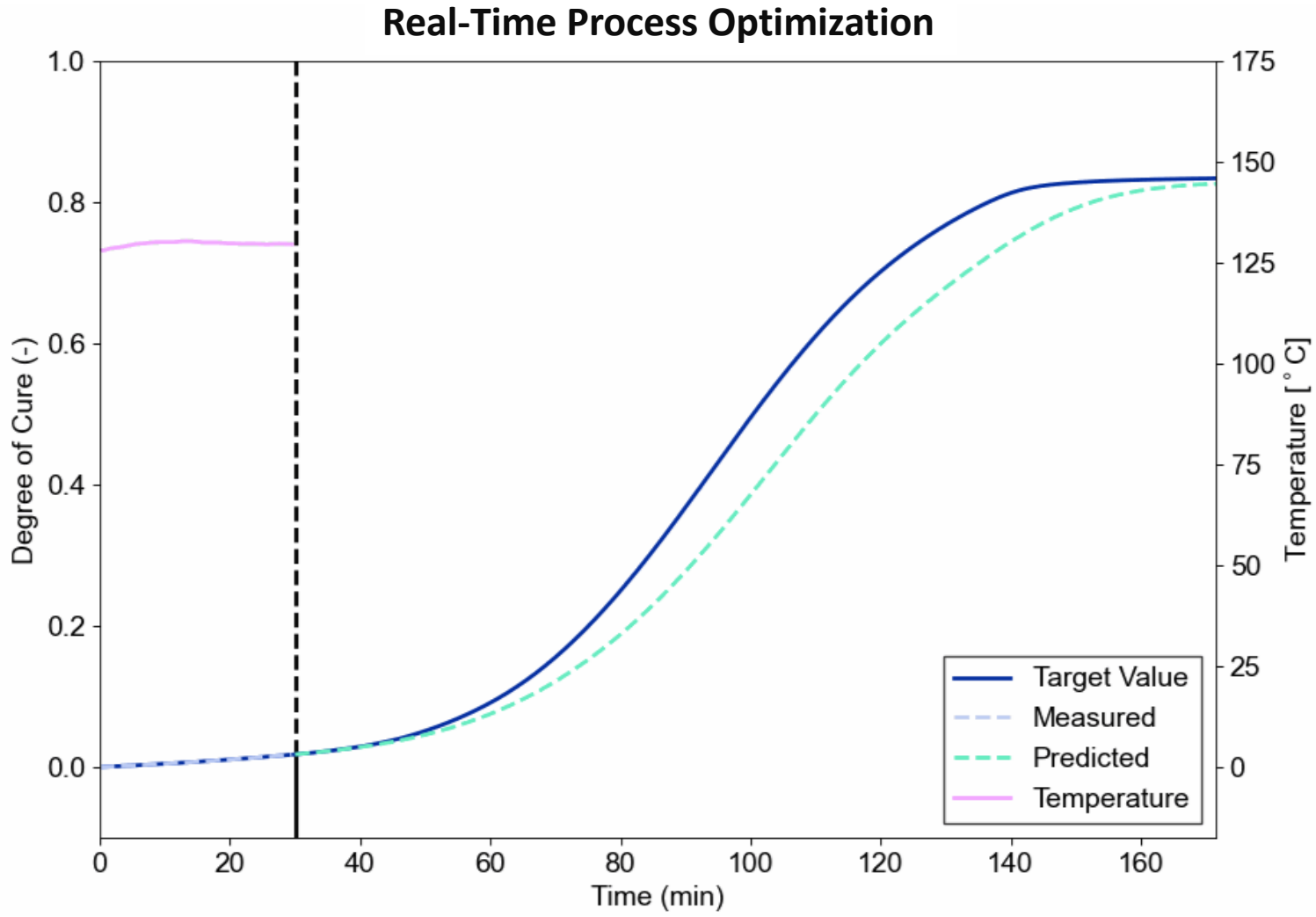
Initial Cycle Time: 760 minutes


1.0
0.8
0.6
0.4
0.2
0.0
Degree of Cure
0
100
200
300
400
500
600
700
Time [min]
Process Step 1
Process Step 2

Simulation and Optimization

Dynamic Process Optimization

- Live predictions lead to dynamically adjusted process parameters



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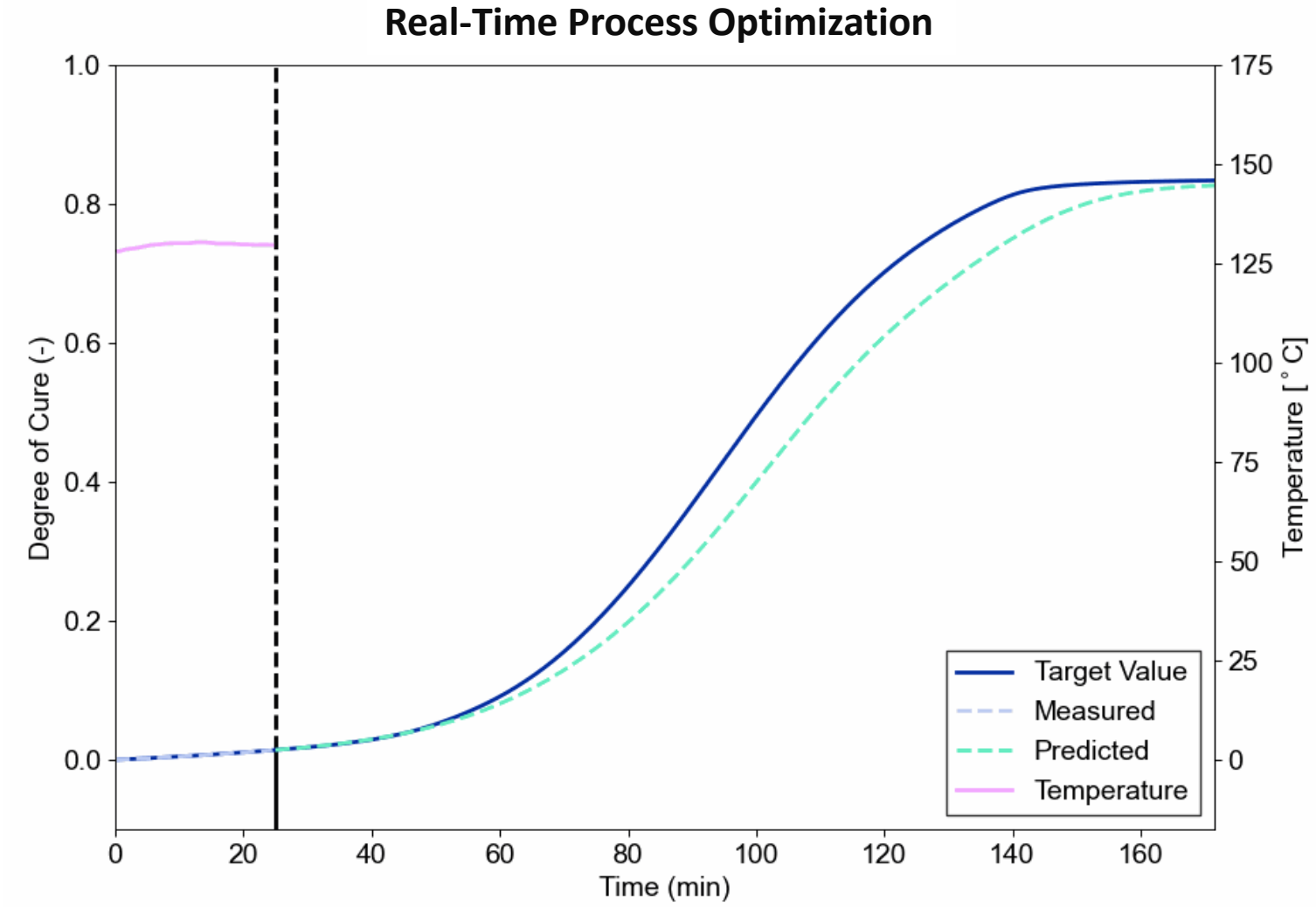
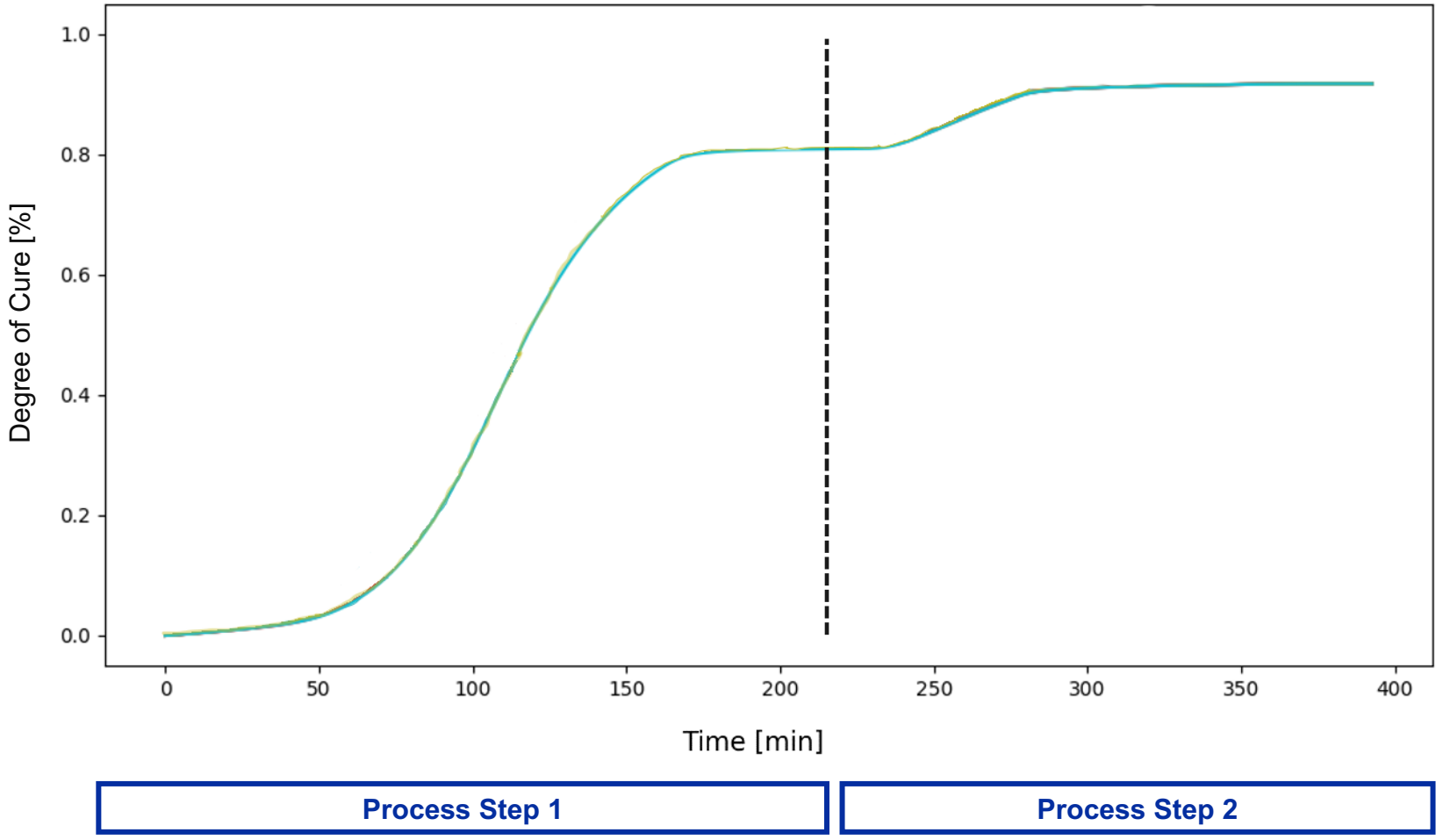


30% **Cycle Time Reduction**

Part-by-Part Deviation

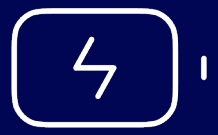


sensXPERT RESULTS

Up to

50%

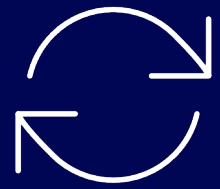
of existing scrap reduction



Up to

23%

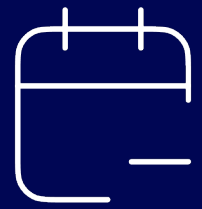
energy savings



Up to

30%

cycle time reduction



Reduce

(re)-commissioning time

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